

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave.St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-013069**Date Inspected:** 09-Apr-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Mr.Huang ming**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Orthotropic Box Girder(OBG)**Summary of Items Observed:**

This CALTRANS OSM Quality Assurance Inspector (QA) Surendra Prabhu was present during the times noted above for observations relative to the fabrication of the Self Anchored Suspension (SAS) Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island, in Shanghai, China. QA observed and/or found the following:

This QA Inspector Randomly observed the following work in progress:

BAY-6-WEST JACKING FRAME (WJF).

Shielded Metal Arc Welding (SMAW) welding of weld joint WJF-0-180 and WJF-0-182. Welders are identified as 053753 and 049769 respectively. ZPMC Quality Control (QC) is identified as Mr. Zhang sheng jun. The welding variables recorded by QC appeared to comply with the Applicable WPS: WPS-B-T-3112-1.

BAY-7-Traveler Rail (TR).

This QA Inspector observed ZPMC welding personnel performing Buttering by Flux Cored Arc Welding (FCAW) process for 10TR3-006. Welder is identified as 048625. In process FCAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e. WPS-345-FCAW-1G (1F)-Repair-1. The Buttering welding was been performed against the B-CWR1100 Rev No: 0 and ZPMC Quality Control (QC) is identified as Mr.Zhong dian xing and Certified Welding Inspector (CWI) is identified as Mr. Li Jia.

WELDING INSPECTION REPORT

(Continued Page 2 of 4)

BAY-8-TR.

This QA Inspector observed ZPMC welding personnel performing Buttering by FCAW process for 11TR11-002. Welder is identified as 219414. In process FCAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e. WPS-345-FCAW-1G (1F)-Repair-1. The Buttering welding was been performed against the B-CWR1340 Rev No: 0 and ZPMC Quality Control (QC) is identified as Mr.Zhang Qiao and Certified Welding Inspector (CWI) is identified as Mr. Sun wei.

BAY- 11, Bolt Tension Test.

This QA inspector witnessed the lot testing of the A325M High Strength Bolts to determine the torque values for the minimum tension required. Below is a list of the lots tested and the average torque values determined. Also witnessed the testing for rotational capacity on same lot numbers.

1. Bolt Lot No: NT991Z, size M24 x 110, RC Set# DHGM240078, Nut Lot No: NT091Z, Washer Lot No: C1290Z and average torque value was 640 N-m.
2. Bolt Lot No: 6768Z, size M24 x 120, RC Set# DHGM240096, Nut Lot No: NT101Z, Washer Lot No: C1290Z and average torque value was 627 N-m.
3. Bolt Lot No: 6770Z, size M24 x 170, RC Set# DHGM240098, Nut Lot No: NT101Z, Washer Lot No: C1290Z and average torque value was 613 N-m.
4. Bolt Lot No: 6771Z, size M24 x 180, RC Set# DHGM240099, Nut Lot No: NT101Z, Washer Lot No: C1290Z and average torque value was 603 N-m.
5. Bolt Lot No: NP581Z, size M24 x 130, RC Set# DHGM240066, Nut Lot No: ND151Z, Washer Lot No: C0819Z and average torque value was 600 N-m.
6. Bolt Lot No: NT961Z, size M24 x 70, RC Set# DHGM240075, Nut Lot No: NT091Z, Washer Lot No: C1290Z and average torque value was 680 N-m.
7. Bolt Lot No: NT971Z, size M24 x 90, RC Set# DHGM240076, Nut Lot No: NT091Z, Washer Lot No: C1290Z and average torque value was 474 N-m.
8. Bolt Lot No: NT131Z, size M24 x 80, RC Set# DHGM240072, Nut Lot No: NT091Z, Washer Lot No: C1290Z and average torque value was 510 N-m.
9. Bolt Lot No: 7676Z, size M24 x 110, RC Set# DHGM240093, Nut Lot No: NT091Z, Washer Lot No: C1290Z and average torque value was 613 N-m.
10. Bolt Lot No: 6772Z, size M24 x 200, RC Set# DHGM240100, Nut Lot No: NT091Z, Washer Lot No: C1290Z and average torque value was 597 N-m.
11. Bolt Lot No: 7095Z, size M24 x 120, RC Set# DHGM240094, Nut Lot No: NT091Z, Washer Lot No: C1290Z

WELDING INSPECTION REPORT

(Continued Page 3 of 4)

and average torque value was 600 N-m.

12. Bolt Lot No: NT981Z, size M24 x 100, RC Set# DHGM240077, Nut Lot No: NT091Z, Washer Lot No: C1290Z and average torque value was 597 N-m.

13. Bolt Lot No: NP501Z, size M24 x 60, RC Set# DHGM240071, Nut Lot No: NT091Z, Washer Lot No: C1290Z and average torque value was 600 N-m.

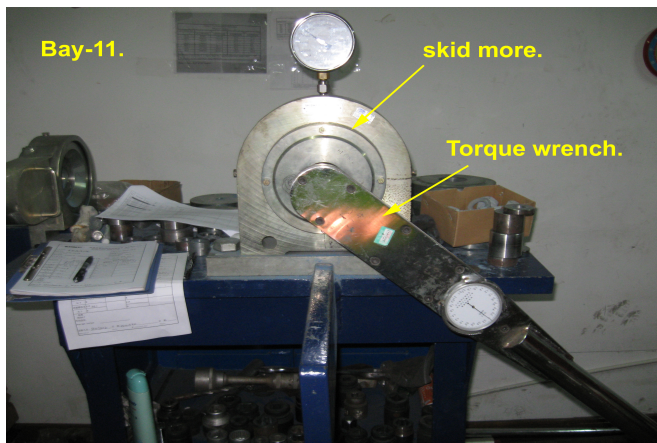
14. Bolt Lot No: NG701Z, size M24 x 100, RC Set# DHGM240054, Nut Lot No: ND151Z, Washer Lot No: C0819Z and average torque value was 597 N-m.

Torque wrench was been used with Sr. No. 2#, Calibration Expiry date: October 04, 2010 and Skidmore Sr.No: 1015, Calibration Expiry date: June 04, 2010.

This QA notified ZPMC QC identified as Mr. Shen jian Bo and ABF inspector identified as Mr. David Wu are present during inspection.

The attached photographs provide additional detail.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.



Summary of Conversations:

Only general conversation was held between QA and Quality Control (QC) concerning this project.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang 15000422372, who represents the Office of Structural Materials for your project.

Inspected By: Prabhu,Surendra

Quality Assurance Inspector

WELDING INSPECTION REPORT

(Continued Page 4 of 4)

Reviewed By: Miller,Mark

QA Reviewer